UNITED STATES BANKRUPTCY COURT

SOUTHERN DISTRICT OF NEW YORK

In re	:	
		Chapter 11
NEXTWAVE PERSONAL COMMUNICATIONS, INC., et al.,	:	98 B 21529 (ASH)
Debtors.	:	
NEXTWAVE PERSONAL COMMUNICATIONS, INC.,	:	
Plaintiff,	:	
-against-	:	Adv. Proc. No. 98-5178A
FEDERAL COMMUNICATIONS COMMISSION,	:	
Defendant.	:	

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ADLAI S. HARDIN, JR.
UNITED STATES BANKRUPTCY JUDGE

DECISION ON CONSTRUCTIVE FRAUDULENT CONVEYANCE CLAIM

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In January 1997 defendant Federal Communications Commission ("FCC") awarded to plaintiff-debtor NextWave Personal Communications, Inc. ("Debtor" or "NPCI") 63 C block licenses for radio spectrum for personal communications service ("PCS") based on NPCI's winning bids aggregating $4.7 billion in the C block auction and reauction ending in May and July 1996. Concluding subsequently that the value of its C block licenses had been less than $1 billion in February 1997 when it executed notes to the FCC for 90% of its bid obligation, NPCI commenced this adversary proceeding in June 1998 seeking, inter alia, a determination that its deposits and promissory notes aggregating $4.7 billion (the "Transfers") constituted constructively fraudulently conveyances subject to avoidance under 11 U.S.C. § 544.

On the facts and the law, I conclude that the Transfers are subject to avoidance under Section 544 in the measure calculated at the foot of this decision.

Jurisdiction

This Court has jurisdiction over this adversary proceeding under 28 U.S.C. §§ 1334(a) and 157(a) and the "Standing Order of Referral of Cases to Bankruptcy Judges" of the United States District Court for the Southern District of New York, dated July 10, 1984 (Ward, Acting C.J.). This is a core proceeding under 28 U.S.C. § 157(b)(2)(H).

Procedural Background

On June 8, 1998 NPCI and certain of its affiliates filed petitions under Chapter 11 of the Bankruptcy Code, and on the same date NPCI filed this adversary proceeding. On July 13, 1998 the FCC moved simultaneously to withdraw the reference and to dismiss the adversary proceeding for lack of subject matter jurisdiction. The District Court denied the motion to withdraw the reference on November 9, 1998. This Court scheduled a hearing on the motion to

dismiss and on December 7, 1998 issued a decision denying the motion with respect to the constructive fraudulent conveyance claim and granting the motion to the extent of dismissing the debtor's other claim against the FCC.

On January 26, 1999 the FCC made a motion for partial summary judgment with the object of determining whether the C block licenses should be valued as of the May and July 1996 dates of conclusion of the auction and reauction, or in January/February 1997 when the FCC awarded the C block licenses to NPCI and NPCI issued its promissory notes for $4.2 billion. On February 16, 1999 the Court issued its decision determining that the C block licenses should be valued as of January/February 1997 when the licenses were awarded and the debtor completed the Transfers.

On March 24, 1999 the FCC filed a motion for judgment on the pleadings asserting, in substance, that the controlling Federal law does not recognize constructive fraud liability in connection with financial transactions that are open to public scrutiny. On April 2, 1999 the Court denied the FCC's motion in an oral ruling and held a final pretrial conference.

The case was tried in seven lengthy trial days commencing April 19 and concluding April 27. The adversary process and the Court benefitted by exceptionally able counsel and witnesses on both sides.

Findings and Conclusions

The following are the Court's findings of fact and conclusions of law pursuant to Federal Rule of Civil Procedure 52 made applicable in this proceeding by Bankruptcy Rule 7052.

Facts

Allocation and Auction of Radio Spectrum

Wireless telecommunications (telephony) involve the transmission of voice and data between points using radio frequency spectrum as the transport medium. The first cellular telephone systems, developed by Bell Laboratories in the 1960s, derived their name from the small geographic areas, called "cells," into which the service region was subdivided. Each cell was supported by a single transmitter/receiver called a base station, which was connected to the public switched telephone network via a mobile services switching center using traditional lines or microwave link. Cellular systems utilized analog technology, although cellular operators are switching to digital.

In 1981 the Federal government, through the FCC, began the process of establishing commercial wireless networks in the United States by designating two cellular licensees within each metropolitan statistical area ("MSA"). These licenses were for frequency located in assigned portions or bandwidths designated in megaherz ("MHz") of the radio spectrum. By 1989 cellular service was operational in every MSA, and the same year the FCC auctioned additional licenses for each rural statistical area ("RSA"). In the early 1990s the government decided to end the cellular duopoly controlling wireless services in the MSAs and RSAs by establishing new licenses that could be used to compete with the incumbent cellular carriers. Specifically, spectrum bandwidth was set aside for PCS.

Prior to Congress' enactment of Section 309(j) of the Federal Communications Act ("FCA"), the House Committee on Energy and Commerce (the "Committee") recognized that the radio frequency spectrum is a "precious but limited resource [that] has become vitally important to our economic success and social well being." See H.R.Rep.No. 103-11 at 247-48

(1993), reprinted in 1993 U.S.C.C.A.N. 378, 574-75. Noting that the congested state of the radio frequency spectrum limited the ability to accommodate new spectrum-dependent technologies and that existing procedures for issuing radio spectrum licenses by lottery and comparative hearings had resulted in regulatory inefficiencies and permitted licensees to exploit a national resource unjustly, the Committee concluded

> that a carefully designed system to obtain competitive bids from competing qualified applicants can speed delivery of services, promote efficient and intensive use of the electromagnetic spectrum, prevent unjust enrichment, and produce revenues to compensate the public for the use of the public airwaves.

Id. at 580.

In Section 309(j) of the FCA Congress authorized the FCC to issue radio spectrum licenses for PCS to various categories of qualified applicants through a system of competitive bidding. 47 U.S.C. § 309(j)(1), (2). Among the categories of applicants, the FCC was directed by the statute to designate portions or "blocks" of the radio spectrum for auction to small, emerging businesses and to establish flexible, deferred license payment plans at below market interest rates to enable such enterprises to participate and compete in the communications industry. 47 U.S.C. § 309(j)(3)(B) and (4)(D).

Consistent with this Congressional mandate, the FCC divided spectrum to be used for PCS into "blocks" designated as the A/B/C/D/E/F blocks and promulgated detailed regulations for public auction of all six blocks. The regulations were adopted with the advice and counsel of knowledgeable experts in the private sector after public hearings and were well designed to ensure that all participants had access to maximum relevant information and opportunity to bid. There are four principal differences among the six blocks — geographic area covered, amount of spectrum per license, eligibility to participate in the auction and timing of the auction.

The A and B block licenses are allocated geographically to 51 Major Trading Areas ("MTAs") throughout the United States and its territories based on the Rand-McNally Commercial Atlas & Marketing Guide (the "Guide"). The C, D, E and F block licenses are allocated geographically to 493 Basic Trading Areas ("BTAs") throughout the United States and its territories based on the Guide. Thus, every MTA incorporates within its borders a cluster of BTAs. Each MTA and BTA is covered by a single license for each block. Hence, the FCC auctioned 51 licenses in each of the A block and B block auctions and 493 licenses in each of the C, D, E and F block auctions.

Each A and B block license is for thirty MHz of spectrum. The C block licenses also consist of thirty MHz of spectrum. Each D, E and F block license covers ten MHz of spectrum.

The C block and F block auctions were open only to entrepreneurs or small businesses including start-up companies, firms owned by minorities or women, and rural telephone companies, sometimes referred to as "Designated Entities." Consistent with the mandate of Section 309(j), recognizing that such entrepreneurial and modestly capitalized enterprises would be incapable of competing with large, established and well-financed companies either in the auction process or the marketplace, Designated Entities received material financial benefits as well as the exclusive right to bid in the C and F block auctions. Respecting the C block, "small businesses" received a 25% bidding credit and the right to pay 90% of their high bid obligation to the FCC (net of the credit) over a ten-year license period, with payment of interest only for the first six years and quarterly installment payments of interest and principal in the last four years. With respect to F block, "small businesses" received a 15% bidding credit, and "very small businesses" received a 25% bidding credit, and the right to pay 80% of their high bid obligations

to the FCC (net of the credit) over a ten-year period, with payment of interest only for the first two years and quarterly installment payments of interest and principal in the last eight years. The interest rate payable by C and F block licensees was the rate on 10-year U.S. Treasury Notes at the time of the license issuance.

All of the auctions were conducted in a simultaneous, multiple round, license-by-license, open bid format. The A/B block auction was conducted simultaneously between December 5, 1994 and March 13, 1995. All of the A/B block licenses, with the exception of certain licenses granted pursuant to pioneer preference grants, were conditionally granted on June 23, 1995. The FCC did not conduct any other broad band PCS spectrum auction prior to the A/B block auctions. There were thirty qualified bidders in the A/B block auction. The 102 licenses issued in these auctions (51 A block; 51 B block) were awarded to bidders who paid an aggregate sum of $7.7 billion for all 102 licenses.

The first C block auction was conducted between December 19, 1995 and May 6, 1996. There were 255 qualified bidders competing for 493 licenses. The regulations prohibited any participant from being declared high bidder of more than 98 (i.e., 20%) of the C block licenses. 47 C.F.R. Ch. I, § 24.710(a).[1] From July 3 to July 16, 1996 the FCC reauctioned certain C block licenses that had become available when the previous high bidders defaulted. Competition in the C block auction, particularly for licenses for BTAs having higher population densities (referred to as "Pops," or population expressed in 000's, as 2,400 Pops for 2,400,000 of population), was intense and drove prices to extraordinarily high levels in comparison to the prior A/B block auction and the subsequent D/E/F block auction. The aggregate net high bids totaled $10.071 billion in the initial C block auction and $904.6 million in the July 1996 reauction.

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[1] The same limitation applied to the F block auction. The regulation prohibited indirect violation of the 20% limitation by the use of affiliates. Id. at § 24.710(b).

Although the FCC had issued a release in August 1995 stating that D/E/F block licenses would be auctioned in the last quarter of 1996, it appears that participants in the marketplace did not anticipate that the D/E/F blocks would be auctioned immediately after the C block auction and before the C block licenses had been awarded and necessary financing to "build out" the C block licenses obtained. Nevertheless, in August 1996 the FCC scheduled the D/E/F block auction, which took place from August 26, 1996 through January 14, 1997. Like the prior PCS auctions, the D/E/F block auction was conducted simultaneously in open bid, multiple round format. Fourteen hundred seventy-nine licenses were at issue in the D/E/F block auction, 493 for each block. There were 153 qualified bidders. Although the D/E/F block auction did not formally close until January 14, 1997, over 80% of the bidding was completed by October 30, 1996, and it was clear by early November that the prices paid for the D/E/F block licenses would be a fraction of those paid in the C block auction. The aggregate high bids, net of bidding credits, for the 1,493 D, E and F block licenses totaled $2.5 billion.

As a consequence of the three PCS auctions, the largest PCS licensees are Sprint PCS and AT&T Wireless PCS, with combinations of A, B, D and E block licenses covering 99% and 93% of total U.S. Pops. The third largest holder of PCS spectrum is NextWave (through its subsidiaries) with 61% of Pops covered, followed by OmniPoint PCS Entrepreneurs (36%), Western Wireless (23%) and PrimeCo PCS (23%), all holding combinations of 30 MHz and 10 MHz licenses in the C and D/E/F blocks.

In addition to the numerous categories of spectrum other than PCS utilized for wireless telephony, wireless operators employ a variety of technologies. The original analog systems have been largely replaced by digital standards, principally time division multiple access ("TDMA"), global system for mobile communications ("GSM"), frequency division multiple

access (“FDMA”) and code division multiple access (“CDMA”). Third generation wireless technology (3G) is the next wireless technology for future applications. AirTouch, Sprint, PCS, Bell Atlantic and PrimeCo (PCS) have all deployed CDMA, forming a nationwide footprint among the cellular and PCS operators. NextWave utilizes CDMA technology.

Although the market for wireless communication has expanded enormously in the 1990s, so has competition and the number of wireless operators, resulting in a dramatic reduction in average revenue per user (“ARPU”). Monthly ARPU declined from $96.83 at year-end 1987 to $47.70 by the end of 1996.

The three separate auctions conducted for the A/B blocks, the C block and the D/E/F blocks produced radically different financial consequences. The six auctions involved different quanta of geography and population (MTAs for the A and B blocks; BTAs for the C, D, E and F blocks) and spectrum (30 MHz for the A, B and C blocks; 10 MHz for the D, E and F blocks). Nevertheless, prices for PCS licenses may be compared, inter alia, by stating the prices in terms of Price per Pop or Price per MHz-Pop. The A/B block licenses were auctioned for an average price of $0.52 per MHz-Pop (all prices here expressed net of bidding credits). For C block, the average price for the main auction ending May 6, 1996 was $1.33 per MHz-Pop, and for the July reauction the average price was $1.94 per MHz-Pop. The D/E/F block licenses were auctioned for an average price of $0.33 per MHz-Pop. NPCI bid an average of $1.53 per MHz-Pop for its 63 C block licenses.

Cellular and PCS operators are not the only ones utilizing radio spectrum for wireless telephone communications. One such system is enhanced specialized mobile radio (“ESMR”). The primary operator utilizing ESMR to construct a nationwide wireless network is Nextel Communications (“Nextel”). The FCC auctioned ESMR licenses in the 800 MHz

frequencies in 1997. The FCC also auctioned licenses for wireless communications services ("WCS") in 1997, and thereafter the FCC auctioned spectrum for local multipoint distribution service ("LMDS"), which can be used for a variety of services, including wireless telephony and data.

Before turning to the particular facts in this case, it is important to highlight a distinguishing feature of the spectrum auctions. In the traditional auction the declaration of the winning bidder fixes the winner's right to and obligation to pay for the thing auctioned. There is little gap in time between the "fall of the hammer" and the exchange of payment for title to the thing auctioned. Not so in a spectrum auction. The FCC's acceptance of a high bid for a license in a particular BTA did not entitle the winner to the license, but only to the exclusive right to file a long form application seeking FCC approval for the license. Such approval was by no means assured and was subject to challenge by competing bidders or others. The approval process might take months to complete, and did in the case of the C block auction.

During the gap period between the conclusion of the C block auction and reauction in May and July 1996 and the approval of NPCI's application in January 1997 there was a profound change in the value of spectrum as perceived by participants in the PCS market and the financial community on which the participants were dependent. This change in perception of value is the genesis of this controversy.

NextWave Participation in the C/D/E/F Block Auction

NPCI is a wholly-owned subsidiary of NextWave Telecom Inc. ("NTI"), a corporation organized and existing under the laws of the State of Delaware with its principal place of business in San Diego, California, and a place of business in Hawthorne, New York. Among NTI's direct and indirect subsidiaries which filed a Chapter 11 petition on June 8, 1998 was

NextWave Power Partners Inc. ("NPPI"). NTI filed for relief under Chapter 11 on December 23, 1998. NTI and its affiliates which have filed in this Court are collectively referred to as "NextWave". NextWave was organized in May 1995 to take advantage of the opportunities in the relatively young but burgeoning wireless telephony industry provided by Section 309(j) of the FCA for small businesses qualified to participate in the C and F block auctions.

C Block Auction

At the conclusion of the C block auction on May 6, 1996 the FCC announced that it had received high bids for the 493 C block licenses and designated approximately 90 high bidders. NPCI was declared the high bidder on 56 licenses. On July 3, 1996 the FCC commenced the 1996 reauction for eighteen C block licenses that became available when previously-declared high bidders failed to tender their required earnest money deposits. At the close of the reauction on July 12, NPCI was high bidder on seven additional licenses, bringing its total C block licenses to 63.

The FCC regulations required prospective bidders to deposit funds with the FCC in advance of the auctions to establish their eligibility to bid ("upfront payments"). The regulations further required winning bidders to make an additional deposit with the FCC to bring their total earnest money deposit to 5% of their total bid obligation. NPCI complied with these requirements, and as of July 23, 1996 NPCI had deposited with the FCC upfront payments and post-auction and reauction deposits aggregating $237,182,402 (the "Pre-License Payments"), representing 5% of NPCI's total bids of $4,743,648,000. NPCI duly filed long-form applications for all 63 C block licenses for which it was declared high bidder. Objections to NPCI's applications were filed by several different entities. The objections were overcome, and on

January 3, 1997 the FCC announced that NPCI would receive its 63 C block licenses, conditioned on compliance with its financial obligations to the FCC.

As required, on January 9, 1997 NPCI made an additional deposit with the FCC bringing its total cash deposits to $474,364,806, or 10% of the total bid price.

On February 14, 1997 the FCC granted NPCI's licenses conditioned upon NPCI executing a series of promissory notes dated as January 3, 1997 payable to the FCC in a total face amount of $4,269,283,223 (the "Notes"). On February 19, 1997 NPCI signed the Notes and accompanying security agreements and delivered them to the FCC.

D/E/F Block Auction

NPCI's affiliate NPPI was the high bidder on 32 10 MHz licenses in the D/E/F block auction which concluded in mid-January 1997. On April 28 and June 27, 1997 the FCC announced the conditional grants to NPPI of 25 D/E/F block licenses and seven D/E/F block licenses, respectively.

NextWave's Efforts to Obtain Public Financing

Like other Designated Entities eligible for the C and F block auctions, NextWave's fledgling capitalization and lack of operating income made resort to the public capital markets essential to fund the high capital cost to build out its PCS system so as to make use of its spectrum licenses. As stated in its Registration Statement filed with the Securities and Exchange Commission (the "SEC") on February 3, 1997 (p. F-7):

> The Company is a development stage enterprise which has incurred net losses since its inception. In order to implement its business plan, significant capital will be required to (i) meet the Company's obligations to the FCC, (ii) build out the PCS network infrastructure necessary to provide service and (iii) cover its operational expenses.

NextWave anticipated that it would require approximately $700 million in public financing to implement its business plan. Half of this amount was proposed to be raised by an initial public offering of equity securities and half by a high yield debt offering. Merrill Lynch was initially retained as lead investment banker for the equity and debt offerings. Additional underwriters for the equity offering included Lehman Brothers, Bear Stearns, Prudential Securities and ING Barings. Additional underwriters for the high yield debt offering included CIB Wood Gundy, Bear Stearns, Lehman Brothers, Prudential Securities and ING Barings. In October 1996 Smith Barney became the lead investment banker for the equity offering and CIB Wood Gundy became the lead investment banker for the debt offering, the other underwriters remaining the same.

The evidence at the trial demonstrated conclusively that, despite the best efforts of NextWave and its investment bankers, it was impossible to obtain the public financing required to build out NextWave's PCS infrastructure and implement its business plan. Although NextWave did obtain loans aggregating some $70 million from two prospective equipment suppliers pursuant to preexisting contractual arrangements, no equity or debt financing could be obtained in the public market.

NextWave was not the only C block licensee to find the public capital markets closed. Approximately $1.6 billion of public financing was sought by C block licensees after the award of their licenses. Not one dollar of this $1.6 billion was raised in the public market. To this date, nearly three years after the 1996 auction and reauction, less than 10% of the C block licenses awarded by the FCC have been placed in service.

FCC Hearings on Restructuring for C Block License Obligations[2]

The marketplace reaction to the C block debt to the FCC did not go unnoticed by the FCC. In early 1997 the FCC received several requests from C block licensees for relief from their installment payments that described a range of difficulties in accessing the capital markets. The FCC Wireless Telecommunications Bureau also received several proposals from C block licensees regarding alternative financing arrangements, as well as a petition for rulemaking regarding C block installment payments. In response to these requests, effective March 31, 1997 the FCC suspended the C block installment payments indefinitely and initiated an elaborate administrative process for restructuring C block license obligations.

On June 2, 1997 the FCC issued a public notice seeking comment on these restructuring proposals and inviting additional ones. The FCC received over 160 filings in response.

On June 30, 1997 the FCC conducted a public forum in Washington, D.C. to discuss issues regarding C block installment payments. Both before and after the public forum the FCC received numerous comments, reply comments and ex parte letters and presentations which provided the Agency with a wide range of restructuring proposals from C block licensees, financial institutions, investors, equipment vendors and other interested parties. The FCC established a task force to evaluate all these proposals and to recommend an appropriate course of action.

On October 16, 1997, after more than six months of effort, the FCC rendered its initial decision regarding financial relief for C block licensees and issued a Restructuring Order

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[2] Source: FCC Memorandum in support of its initial motion to dismiss at pp. 4-7. The Court takes judicial notice of those documents in the public record annexed to the FCC's motion to dismiss upon which the factual recitation in the FCC's Memorandum was based.

which provided distressed C block licensees with four distinct, mutually-exclusive options. In response to the Restructuring Order, the FCC received 37 petitions for reconsideration, seventeen oppositions to these petitions, sixteen replies and 38 ex parte filings. Several petitioners claimed that the options set forth in the Restructuring Order did "not provide commercially viable alternatives for financially troubled licensees" and "fell short of meaningful relief."

The FCC issued its Reconsideration Order on March 24, 1998. Upon review of the administrative record, the FCC decided that "a radical departure from the [Restructuring Order was] not warranted." Accordingly, the FCC left intact the "basic framework" of the Restructuring Order, modifying it only slightly in the Reconsideration Order "to allow licensees to be more flexible in making their elections for licenses in different geographic areas, to use more of the downpayments already on deposit, and to be more flexible in the use of those downpayments."

The 1999 Reauction of C, E and F Block Licenses

In the spring of 1999 the FCC conducted a reauction of 347 licenses from the C, E and F blocks, including 206 30 MHz C block licenses, 133 15 MHz C block licenses (the 15 MHz C block licenses presumably resulted from a licensee electing the disaggregation alternative under the FCC's Restructuring Orders), 6 10 MHz E block licenses and two 10 MHz F block licenses. The auction began on March 23 and concluded after 78 rounds of bidding on April 15, 1999. There were 76 qualified bidders.

Three hundred two licenses were bid in by 57 bidders, leaving 45 licenses unsold. The aggregate of net bids for all 302 licenses was $342,840,945, equating to a little less than $0.20 per MHz-Pop.

Discussion

I. Constructive Fraudulent Conveyance Law

A. Statutory Framework

Section 544(b)(1) of the Bankruptcy Code provides:

> . . . the trustee may avoid any transfer of an interest of the debtor in property or any obligation incurred by the debtor that is voidable under applicable law by a creditor holding an unsecured claim that is allowable under section 502 of this title or that is not allowable only under section 502(e) of this title.

11 U.S.C. § 544(b).

Section 544 incorporates the Uniform Fraudulent Transfer Act ("UFTA"), as codified by the State of California, which provides, in pertinent part:

> A transfer made or an obligation incurred by a debtor is fraudulent as to a creditor, whether the creditor's claim arose before or after the transfer was made or the obligation was incurred, if the debtor made the transfer or incurred the obligation as follows:
>
> * * *
>
> (b) without receiving reasonably equivalent value in exchange for the transfer or obligation, and the debtor:
>
> (1) was engaged or was about to engage in a business or transaction for which the remaining assets of the debtor were unreasonably small in relation to the business or transaction; or
>
> (2) intended to incur, or believed or reasonably should have believed that he or she would incur, debts beyond his or her ability to pay as they became due.

Cal. Civ. Code § 3439.04 (West 1997). The UFTA, which has been adopted by 33 states and is the successor to the Uniform Fraudulent Conveyance Act ("UFCA"), resembles the provisions of 11 U.S.C. § 548 more closely than did the UFCA. 5 Collier on Bankruptcy ¶ 548.01 [3], p. 548-8 (15th ed. 1979).

Section 548 of the Bankruptcy Code provides:

(a)(1) The trustee may avoid any transfer of an interest of the debtor in property, or any obligation incurred by the debtor, that was made or incurred on or within one year before the date of the filing of the petition, if the debtor voluntarily or involuntarily–

> (A) made such transfer or incurred such obligation with actual intent to hinder, delay, or defraud any entity to which the debtor was or became, on or after the date that such transfer was made or such obligation was incurred, indebted; or
>
> (B) (i) received less than a reasonably equivalent value in exchange for such transfer or obligation; and
>
> (ii) (I) was insolvent on the date that such transfer was made or such obligation was incurred, or became insolvent as a result of such transfer or obligation;
>
> (II) was engaged in business or a transaction, or was about to engage in business or a transaction for which any property remaining with the debtor was an unreasonably small capital; or
>
> (III) intended to incur, or believed that the debtor would incur, debts that would be beyond the debtor's ability to pay such debts as such debts matured.

11 U.S.C. § 548(a).

In considering the appropriate choice of law, the fraudulent transfer provisions of California, New York[3] or the District of Columbia[4] may be applicable. The Court accepts NPCI's

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[3] New York's Debtor and Creditor Law § 273 provides:

> Every conveyance made and every obligation incurred by a person who is or will be thereby rendered insolvent is fraudulent as to creditors without regard to his actual intent if the conveyance is made or the obligation is incurred without a fair consideration.

[4] District of Columbia Code (1981) § 28-3105 provides:

> (a) A transfer made, or obligation incurred, by a debtor is fraudulent as to a creditor whose claim arose before the transfer was made or the obligation was incurred if the debtor made the transfer or incurred the obligation without receiving a reasonably equivalent value in exchange for the transfer or obligation and the debtor was insolvent at that time or the debtor became insolvent as a result of the transfer or obligation.

unopposed position that the fraudulent conveyance statutes in each of these states are, in all material respects, the same with a minor exception in the case of New York. To explain, both California and the District of Columbia have incorporated the UFTA. New York continues to apply the UFCA, which requires the exchange of "fair consideration" rather than "reasonably equivalent value." N.Y. Debt. & Cred. Law § 273 (McKinney 1990). Fair consideration is defined in § 272 of the New York Debtor and Creditor Law to incorporate the concept of "good faith." See In re Checkmate Stereo & Electronics, Ltd., 9 B.R. 585, 591 (Bankr. E.D.N.Y. 1981). Courts within this district have repeatedly held that the elements needed to prevail on a fraudulent conveyance action are essentially the same under New York's Fraudulent Conveyance Act and 11 U.S.C. § 548. See, e.g., In re Ames Dept. Stores, Inc., 161 B.R. 87, 89 n.1 (Bankr. S.D.N.Y. 1993); In re Curtina Int'l, Inc., 23 B.R. 969, 973-74 (Bankr. S.D.N.Y. 1982). The California, New York and District of Columbia fraudulent conveyance statutes are also in all material respects the same as the fraudulent conveyance provisions provided in 11 U.S.C. § 548. Because Section 548 of the Bankruptcy Code and the UFTA "are of common ancestry," both courts and commentators have concluded that "[c]ases under one are . . . authoritative under the other." Interpool Ltd. v. Patterson, 890 F. Supp. 259, 268 n. 8 (S.D.N.Y. 1995); see also, In re United Energy Corp., 944 F.2d 589, 593-94 (9th Cir. BAP 1991); 5 Lawrence P. King, Collier on Bankruptcy, ¶ 548.01[4] (1999) ("Cases decided under the UFCA and UFTA are considered to be persuasive authority for similar issues arising under section 548 of the Code"). Accordingly, as the parties appear to concede, a choice of law analysis is unnecessary in the instant case since the fundamental legal principles would not change under any possible choice of law.

B. General Purpose

Section 544 promotes the central bankruptcy policy of equitable distribution amongst all creditors. See In re Giordano, 188 B.R. 84, 88 (D.R.I. 1995); In re 375 Park Avenue Assocs., Inc., 182 B.R. 690, 695 (Bankr. S.D.N.Y. 1995); In re AP Industries, 117 B.R. 789, 800 (Bankr. S.D.N.Y. 1990) (citing Cumberland Oil Corp. v. Thropp, 791 F.2d 1037, 1042 (2d Cir. 1986), cert.denied, 479 U.S. 950 (1986)). Further, Section 544 advances the goal that a debtor's prepetition transfers should not deprive creditors of property from which their claims can be satisfied. In re Stoecker, 131 B.R. 979, 984 (Bankr. N.D.Ill. 1991) (citing H.Rep. No. 595, 95th Cong., 1st Sess. 375 (1977); S. Rep. No. 989, 95th Cong., 2d Sess. 89-90 (1978), *reprinted in* 1978 U.S.C.C.A.N. 5787).

C. Elements of Recovery

As set forth above, in order to prevail on its Section 544 claim, NPCI must demonstrate that it: (1) incurred an obligation (2) at a time when it was engaged or was about to engage in a business or transaction for which the remaining assets of NPCI were unreasonably small in relation to the business or transaction, or intended to incur, or believed or reasonably should have believed that it would incur, debts beyond its ability to pay as they became due (3) for which it did not receive reasonably equivalent value.

(1) Incurrence of Obligation

Generally an obligation is incurred when a debtor becomes legally obligated to pay. In re Emerald Oil Co., 695 F.2d 833, 837 (5th Cir. 1983); Barash v. Public Finance Corp., 658 F.2d 504, 511 (7th Cir. 1981); see also In re G. Survivor Corp., 217 B.R. 433, 440 (Bankr. S.D.N.Y. 1998). While the Bankruptcy Code is silent on the question of when a debt or obligation is

"incurred," courts have not questioned that an "obligation" to pay principal indebtedness under a promissory note is "incurred" on the date the note is executed and delivered. E.g., In re Iowa Premium Service., 695 F.2d 1109, 1111-12 (8th Cir. 1982); In re Smith-Douglass, Inc., 842 F.2d 729, 730 (4th Cir. 1988); In re Pippin, 46 B.R. 281, 283-84 (Bankr. W.D.La. 1984) (holding that, for preference purposes, debtor becomes legally obligated to pay under installment payment contract when contract is executed). The California UFTA provides that "[a]n obligation is incurred . . . if evidenced by a writing, when the writing executed by the obligor is delivered to, or for the benefit of, the obligee." Cal. Civ. Code § 3439.06(e)(2). A statutory provision that is clear and unequivocal on its face should be given full force and effect. See United States v. Ron Pair Enterprises, Inc., 489 U.S. 235, 240-41, 242 (1989).

Subject to section II.A., below, the issue has been addressed in the FCC's motion for partial summary judgment. In resolving that motion this Court held that the transfer of licenses for dollars and Notes occurred in the time frame January 3 to February 19, 1997. There is no dispute that the Notes were signed and delivered February 19, 1997, although dated as of January 3, 1997.

(2) Insolvency

Insolvency is a question of fact. In re Roblin Indus., Inc., 78 F.3d 30, 35 (2d Cir. 1996). Under Section 3439.04 of the California Civil Code, NPCI needs only to prove that its remaining assets were unreasonably small in relation to the $4.7 billion transaction in which it was about to engage or that upon incurrence of the obligation, the debtor's debts were beyond its reasonable ability to repay. See, e.g., Patterson v. Missler, 48 Cal.Rptr. 215, 217 (Cal. App. 4th 1965). A transfer may be avoided where the debtor does not receive reasonably equivalent value

in exchange for a transfer and the debtor was either "insolvent at the time of the transfer or was engaged in business with unreasonably small capital." See United Energy, 944 F.2d at 594. As the term "unreasonably" is relative, it requires judicial consideration of the overall state of affairs surrounding the corporation and the transfer in question. In re Suburban Motor Freight, 124 B.R. 984, 999 (Bankr. S.D.Ohio); Barrett v. Continental Illinois Nat. Bank & Trust, 882 F.2d 1, 4 (1st Cir. 1989), cert. denied, 494 U.S. 1028 (1990). To determine the existence of "unreasonably small assets," courts on a case-by-case basis have used a "balance sheet approach" weighing the raw financial data of the balance sheet of the debtor against the nature of the entity and its need for capital over time. Barrett, 882 F.2d at 4. Another approach to the "unreasonably small assets" test is a focus on the debtor's future ability to generate cash and pay its debts as they come due. See Moody v. Security Pacific Business Credit, Inc., 971 F.2d 1056, 1073 (3d Cir. 1992); see also In re Vadnais Lumber Supply, Inc., 100 B.R. 127, 137 (Bankr. D.Mass. 1989).

This element of a Section 544 cause of action has been resolved by the parties by stipulation. In Section V of the Joint Pretrial Order, it has been stipulated that NPCI has and had creditors holding unsecured claims allowable under Section 502 of the Bankruptcy Code which claims arose both before and after NPCI's obligation to the FCC was incurred; that when NPCI's obligation to the FCC was incurred, NPCI was engaged or was about to engage in a business or transaction for which its remaining assets were unreasonably small in relation to the business or transaction; and that both NPCI and NextWave (as defined above) were insolvent on January 3 and February 14 and 19, 1997, and that NPCI was insolvent on June 8, 1998.

(3) Exchange of Reasonably Equivalent Value

The parties agree that the primary analysis of the fraudulent conveyance claim focuses upon the value of the consideration exchanged between the parties at the time of the conveyance or incurrence of debt which is challenged. See In re Best Products Co.,168 B.R. 35, 54 (Bankr. S.D.N.Y. 1994); see also In re Fairchild Aircraft Corp., 6 F.3d 1119, 1126 & n.8 (5th Cir. 1993); In re Morris Communications NC, Inc., 914 F.2d 458, 466 (4th Cir. 1990). Essentially, the Court must determine whether NPCI received reasonably equivalent value by exchanging $474 million in cash and $4.27 billion in promissory notes for 63 C block licenses. See Rubin v. Manufacturers Hanover Trust Co., 661 F.2d 979, 993 (2d Cir. 1981); In re Curtina Int'l, Inc., 23 B.R. at 974; Whitehouse v. Six Corporation, 48 Cal.Rptr.2d 600, 604 (Cal. Ct. App. 1996). In other words, the analysis should be directed at what NPCI surrendered and what NPCI received. In re United Energy Corp., 944 F.2d at 594-95.

Reasonable equivalency is a "measurement test," wherein "all aspects of the transaction must be examined to calculate the value of all the benefits and burdens to the debtor, direct or indirect." In re Suburban Motor Freight, 124 B.R. at 997; Rubin v. Manufacturers Hanover Trust Co., 661 F.2d 979 (2d Cir. 1981); In re Vadnais Lumber Supply, Inc., 100 B.R. at 136. "There is no precise formula to ascertain what constitutes reasonably equivalent value; the court as the trier of facts must determine this issue under all of the facts and circumstances of the case." In re Curtina Int'l, Inc., 23 B.R. at 974; see also Interpool Ltd. v. Patterson, 890 F. Supp. at 268 ("the Court must consider the facts and circumstances of each case in order to determine whether reasonably equivalent value was given"); In re Joing, 82 B.R. 495, 499 (D.Minn. 1988); In re Henry-Luqueer Props, Inc., 145 B.R. 771, 775 (Bankr. E.D.N.Y. 1992).

It has been said that "the debtor need not collect a dollar-for-dollar equivalent to receive reasonably equivalent value." In re Fairchild Aircraft Corp., 6 F.3d at 1125-26. Instead, "[t]he touchstone is whether the transaction conferred realizable commercial value on the debtor reasonably equivalent to the realizable commercial value of the assets transferred." Mellon Bank, N.A. v. Metro Communications, Inc., 945 F.2d 635, 647 (3d Cir. 1991), cert. denied, 503 U.S. 937 (1992).

The three basic approaches to valuation are: (1) replacement cost approach, (2) the market comparison approach and (3) the income stream analysis. See In re Executive House Associates, 99 B.R. 266, 278 (Bankr. E.D.Pa. 1989).

Valuation was the issue tried in this case. The Court's analysis, findings and conclusion are set forth in section III, below.

II. Preliminary Issues

A. Transfer Date of Pre-License Payments

The FCC argues as a matter of law that the Pre-License Payments totaling $237,182,402[5] equating to 5% of NPCI's C block bids, which had been fully paid to the FCC by July 23, 1996, must be deemed a completed and irrevocable transfer as of that date for fraudulent conveyance purposes. The FCC asserts that "NextWave cannot seriously dispute that it received something of reasonably equivalent value in exchange for" the Pre-License Payments, which

[5] It will be recalled that the $237,182,402 was comprised of two pre-auction upfront payments totaling approximately $86 million and two post-auction cash payments totaling approximately $151,000.

constituted a "5% opportunity cost for obtaining the 63 C block licenses for which NextWave had bid $4.74 billion."[6]

In this Court's view, the issue thus raised turns on whether the Pre-License Payments were final and irrevocable by July 23, 1996. If the Pre-License Payments were not subject to repayment to NPCI irrespective of the grant or denial of the licenses in early 1997, one would have to conclude that this 5% deposit was indeed a completed transfer for fraudulent conveyance purposes. As such, it would be in the nature of an "opportunity cost" or a "ticket of admission" to the FCC approval process and its value should be judged as of the date of payment.

On the other hand, if NPCI were entitled to recover the Pre-License Payments in whole or in part depending on the award or denial of the licenses, then to that extent the transfer could not be said to take place for fraudulent conveyance purposes until the award or denial of the licenses. The answer is to be found in the FCC regulations.

Before the auction process begins, FCC regulations require upfront payments as a condition to eligibility for bidding. 47 C.F.R. §§ 1.2106(a) and (c), 24.706(a) (All auction participants are "required to submit upfront payments in accordance with § 1.2106 . . ."), 24.711(a)(1). Any upfront payments must be credited toward any downpayments "required for licenses on which the bidder is the high bidder." 47 C.F.R. § 1.2106(d). If the upfront deposit exceeds "the required deposit of a winning bidder," the balance may be refunded "after determining that no bid withdrawal penalties are owed by that bidder." Id.

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[6] In its decision on the FCC's motion for partial summary judgment, this Court held that the "transfers" as there defined (i.e., the 5% deposit paid in by July 23, 1996, the additional 5% deposit paid in January 1997 and the Notes) constituted transfers made or obligations incurred in the January/February 1997 time frame and were to be valued as of those dates. The FCC did not argue in the motion for partial summary judgment that the Pre-License Payments alone should be deemed completed transfers as of July 1996, and the Court did not decide the issue now presented.

A clear distinction is made between bidders and the high bidder. Section 1.2106 requires the FCC to credit the upfront payment to the winning bidder's required deposit, subsuming it into the required deposit. The regulation is silent as to upfront payments of unsuccessful bidders, but it is uncontested that the amounts are refunded to them. Since the upfront payments must be refunded to unsuccessful bidders, they cannot be considered an irrevocable "admission ticket." This is not the case, however, for the post-auction downpayment.

Once the auction closes, the FCC must declare a high bidder. 47 C.F.R. § 1.2107(a). Upon being declared the high bidder for a particular license, the bidder must promptly deposit enough money to bring its total deposit up to the 5% level and submit its "long form" application. 47 C.F.R. §§ 1.2107(b), 24.711(a)(2). The deposit is held:

> . . . until the high bidder has been awarded the license and has paid the remaining balance due on the license or authorization, in which case it will not be returned, or until the winning bidder is found unqualified to be a licensee or has defaulted, in which case <u>it will be returned</u>, less applicable payments.

47 C.F.R. § 1.2107(b), emphasis supplied. This provision makes clear that the 5% deposit, <u>i.e.</u> the Pre-License Payments, will be returned "less applicable payments," referring to the penalty provisions in Sections 1.2104(g)(2) and 24.704(a)(2).

These provisions impose penalties in the event of "default or disqualification after close of auction." The minimum possible penalty is 3% of the defaulting bidder's high bid. 47 C.F.R. §§ 1.2104(g)(2) and 24.704(a)(2).[7] One might argue that some ambiguity exists regarding the applicability of these penalties because the provisions refer only to withdrawal, default or disqualification, while other sections of the regulations refer to "License grant, denial, default and disqualification," 47 C.F.R. §§ 1.2109 and 24.708, suggesting that no penalties might be mandated

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[7] The penalties under these sections might far exceed 3% of the defaulting bidder's bid, but in no event would the penalty be less than 3%.

in the event of a "denial" of license as opposed to "disqualification." However, Section 1.2109 resolves the ambiguity in subsection (c), which states:

> A winning bidder who is found unqualified to be a licensee, fails to remit the balance of its winning bid in a timely manner, or defaults or is disqualified for any reason after having made the required downpayment, will be deemed to have defaulted and will be liable for the payment set forth in § 1.2104(g)(2).

Id., emphasis supplied. Thus the FCC's denial of a high bidder's license application, for any reason, will trigger at least the 3% penalty.

Taking these regulatory provisions as a whole, once a bidder has been declared high bidder, it must place at least the 3% of its bid at risk irrevocably. Win or lose in the approval process, the regulations provide for no set of circumstances in which this 3% minimum may be returned to the high bidder.

The FCC is therefore correct to the extent that 3% of a bidder's total bid, or three-fifths of its downpayment, was in substance and effect an "admission ticket" to the regulatory process. No guarantee that the bidder would ultimately qualify and receive a grant of license existed, but the regulations comprehend to a certainty that a high bidder will never recover at least the 3% portion of its 5% downpayment whether by dint of default or disqualification.

Accordingly, $142,309,000 (the "3% Payment"), equating to 3% of NPCI's total C block bids of $4.74 billion or three-fifths of the Pre-License Payments, was irrevocably paid by NPCI to the FCC by July 23,1996 and would not be repaid to NPCI irrespective of the outcome of the approval process. The consideration received by NPCI in exchange for the irrevocable 3% Payment was the exclusive right to proceed with the approval process by filing a long form application for the 63 C block licenses on which it was high bidder. That consideration constituted reasonably equivalent value for the 3% Payment as a matter of fact and law.

B. Satisfaction of Antecedent Debt as Reasonably Equivalent Value

Little need be said of the FCC's argument that the debtor's $474 million of cash downpayments and $4.27 billion of Notes satisfied an "antecedent debt." The argument seems to be, in essence, that when the debtor made its required license payments by delivering the Notes, and thereby did not default, it "satisfied" the potential penalty obligation it might have incurred if it had defaulted. Thus, the FCC asks the Court to find that NPCI's $4.7 billion of cash transfers and Notes payable to the FCC was "reasonably equivalent" in value to the penalties for which NPCI might have been liable to the FCC if NPCI had defaulted.

The argument fails because it is based on something that did not happen. The fact is that there was no antecedent debt. No penalty was ever calculated. No penalty was ever applicable. NPCI did not default and its application was not denied. Analysis of legal rights and obligations under the Bankruptcy Code will be determined upon facts, not hypothetical default obligations never quantified or incurred.

Of course, satisfaction of a genuine antecedent debt may indeed constitute "value" for a prepetition payment or other transfer. See, 11 U.S.C. § 548(d)(2)(A); In re United Energy Corp., 944 F.2d 589 (9th Cir. 1991). In this case, however, the "value" received by NPCI for its $4.7 billion was 63 C block licenses, not satisfaction of a fictitious antecedent debt.

III. Valuation of the C Block Licenses

A. Statement of the Issue

The parties agree on the issue that determines the outcome of the debtor's constructive fraudulent conveyance claim. As stated by NPCI:

> [T]he trial of this Adversary Proceeding requires one straight-forward determination by this Court — what was the value of NPCI's C Block licenses in February 1997? (NPCI Trial Memorandum at 2)

As stated by the FCC:

> The only issue for this Court to resolve at trial is whether the cash transfers made, and payment obligations incurred, by plaintiff-debtor . . . during the C block auction and licensing process were reasonably equivalent in value to the radio spectrum rights that NextWave acquired from [the FCC]. (FCC Trial Memorandum at 1)

The parties agree that:

> Furthermore, the proper analysis focuses solely on the value of the consideration exchanged between the parties "at the time of the conveyance or incurrence of debt which is challenged." [citations omitted] (FCC Trial Memorandum at 4; NPCI's Response at 2)

Nevertheless, highly competent experts for the parties presented radically disparate conclusions on the issue. Their divergence reflects the different methodology and different concept of "value" employed by each side. The task of the Court is to determine which approach most faithfully accords with the statute and case law.

B. Methodology

As noted above, there are three generally-accepted methods of valuing property — (1) the replacement cost approach, (2) the market comparison approach, and (3) income stream or discounted cash flow analysis. Replacement cost measures the value of an asset by the cost to construct or replace it with another of like utility, taking into account depreciation in the asset to be valued. The market approach measures the value of an asset through analysis of recent market transactions involving comparable property. The income approach measures the value of an asset by the present value of its future earnings using discounted cash flow ("DCF") analysis. For purposes of this case, the replacement cost approach is subsumed into the market approach because

the cost to replace spectrum licenses can only be determined by the cost of similar licenses auctioned by the FCC. As stated by the Bankruptcy Court in a similar litigation between a C block licensee and the FCC, GWI PSCI Inc., et al. v. Federal Communications Commission (In re GWI PSCI Inc., et al.), Adversary No. 397-3492: "The market or comparable approach and the cost approach for these assets is basically the same. Comparables are based on auctions by the FCC. The only way to replace these licenses is by purchase at an FCC auction." (Transcript of April 24, 1998 at 13)

(1) Market Comparable Technique

The necessary predicates for employing the market comparable method of valuation are the existence of arm's length, marketplace transactions within a reasonably proximate time frame involving the same or basically comparable assets. The assets involved in the transactions to be compared need not be identical to the property to be valued. The test is whether the properties to be compared are sufficiently similar in nature and interchangeable in function that any differences can rationally be reflected by appropriate adjustments.[8]

NPCI's expert, Anthony P. Kern, employed the market comparable approach to value the C block licenses. Mr. Kern issued two reports, one valuing the assets as of January 13, 1997, the date the FCC announced the award of C block licenses to NPCI, the other valuing as of February 19, the date on which NPCI complied with its purchase price obligations by executing the Notes and delivering them to the FCC. Mr. Kern also issued a supplementary report (collectively with the January 13 and February 19 reports, the "Kern Report") correcting a calculation omission.

[8] For example, virtually every parcel of real estate differs from other parcels in some respects and, indeed, real property is frequently characterized as "unique" on a piece-by-piece basis. Yet the market comparable technique is traditionally accepted as the proper method of valuing real estate in most cases, using adjustments to reconcile differences between specific parcels.

It is NPCI's legal position that February 19 is the proper valuation date, although Mr. Kern's valuation for February 19 is higher than that for January 13.

Mr. Kern examined for potential comparability the A and B block licenses auctioned in early 1995, the D/E/F block licenses auctioned during the last quarter of 1996 and a number of PCS license transactions subsequent to these auctions. For reasons articulated in his report, Mr. Kern rejected the A/B block auctions and the subsequent PCS license transactions as comparables.

Mr. Kern selected the D, E and F block auction prices as appropriate comparables for his analysis. After applying adjustments which he deemed appropriate to account for material differences between the C block licenses, on the one hand, and the D, E and F block licenses on the other, Mr. Kern arrived at a reconciled fair market value per Pop for the C block licenses of $7.82, equating to a fair market value for NPCI's C block licenses of $810,358,264, rounded to $810.4 million.

(2) <u>Discounted Cash Flow Analysis</u>

Discounted cash flow analysis is a long-recognized and widely-used method of predicting or projecting value. If neither replacement cost nor comparative market can be utilized, DCF analysis may be the only practical way to evaluate property.

As employed by investment bankers and economists, DCF analysis entails the creation of a computer model incorporating on a line-by-line basis assumptions and projections of the myriad components of the overall market, market penetration and sales, revenues, costs, and the asset base and capitalization which support them, projected out over all relevant market conditions expected to prevail in a finite time period, in this case ten years. DCF analysis is widely if not universally used in the business and financial world as a tool to assist management in making decisions whether to invest in or dispose of businesses or major assets. It is generally not used as a tool

for determining fair market value, particularly when that determination can be made using either replacement cost or market comparables. DCF analysis is obviously more reliable if the assumptions and line item components are based on actual, historical performance figures or contractual rights and obligations.

The FCC's expert, Dr. David J. Salant, prepared and relied upon a DCF model as the basis for his conclusion of value in his report (the "Salant Report"). Dr. Salant's valuation of NPCI C block licenses using a DCF model is presented in Part IV at pages 42-47 of the Salant Report, and the "Details on the Discounted Cash Flow Valuation of NextWave's C Block Licenses" is to be found in Exhibit F to the Report. The entire remainder of the Salant Report and Exhibits is devoted to rebuttal addressed to the Kern Report. As stated by Dr. Salant:

> A good DCF model requires the analyst to think through, document and quantify each and every revenue, cost, multiple and discount rate. While the DCF approach may require the analyst to make "hundreds of assumptions," the discipline of the DCF approach in the hands of a knowledgeable practitioner means that those assumptions are logically consistent and reasonable. Indeed, one of the major advantages of the DCF approach is that another analyst can explicitly test the sensitivities of his or her result to changes in the assumptions. (Salant Report 43)

Dr. Salant continued:

> Any DCF analysis is subject to second-guessing because of the assumptions needed to complete the calculations. This DCF analysis has two main purposes: (1) to derive license values from a consistent and conservative set of assumptions based on our considerable experience in valuing PCS and cellular licenses, and (2) to compute a confidence interval, consisting of an extremely cautious lower bound and a moderately optimistic upper bound about how much a reasonable bidder/license buyer might be willing to pay for the licenses that NextWave won. The end result of our DCF analysis is a tool that allows us to perform a carefully considered estimate of the value of the licenses.
>
> We use the DCF to compute the maximum amount a very prudent firm would be willing to pay for the licenses. . . .
>
> No DCF analysis is perfect, and one can always debate the underlying assumptions. . . . Besides our own experience, our analysis uses industry sources

> and NextWave documents to form projections of key variables such as penetration and average revenue per user. (Salant Report 44-45)

Under the heading "Summary Description of the DCF Model," Dr. Salant stated:

> The DCF model calculates revenues based upon information about wireless market penetration, PCS market penetration, minutes of use, retail revenue per user and wholesale revenue per user. Capital expenditures include cell site build-out and switching costs. Operating expenses include network related, marketing and billing expenses. For the base case we apply a 16% cost of capital, which is consistent with that used by NextWave in many of their DCF runs. (Salant Report 45)

In preparing his DCF analysis, Dr. Salant did not undertake to prepare and document the "hundreds of assumptions" customarily required for a DCF analysis in the business and financial world. Exhibit F to the Salant Report, entitled "Details on the Discounted Cash Flow Valuation" consists of a bar chart backed up by three sheets. The first sheet entitled "Free Cash Flow" contains the following line items: EBITDA, Taxes, FCC License Payment, Capital Expenditures, Change in Working Capital, and a resulting bottom line entitled Unlevered Free Cash Flow. The second sheet entitled "Equipment Costs" contains two categories, Non Recurring Costs (BTS Cost, Carrier Cost, Switch Cost and Switch Capacity Per Subscriber) and monthly Recurring Costs (BTS Site Cost, Carrier Cost, Switching Cost). The third sheet entitled "Key Baseline Values" contains eleven line items (Total Population, Covered Pops, PCS Company Subscribers, Basic Minutes Per User, PCS Average Revenue Per User, Data Service Percentage of PCS Service Revenue, Capital Expenditures per Pop, Operating Expense per Pop, # BTS, # Carriers and # BSCs), and sets forth three additional assumptions, Number of Competitors at 6, Cost of Capital at 16% and Terminal Value Multiplier at 9. All line item projections on all three sheets are extended ten years from 1997 through 2006.

Once the DCF model has been created, its production of a number for value is a mathematical computation by the computer. The computation obviously will change to reflect any change in the assumptions in the model.

Dr. Salant's DCF model produced a "retail base case" value of approximately $2.5 billion as reflected on the bar chart in Exhibit F to his Report. Dr. Salant reasoned, however, that NextWave's strategy was to become a "carrier's carrier" and to market its PCS services to other providers, such as OmniPoint (with which NextWave had a marketing contract), which would in turn sell to the retail market. To reflect the value of this strategy inherent in NextWave's C block licenses Dr. Salant calculated the "wholesale base case" in the second column of the bar chart by simply eliminating from the model all costs associated with the retail part of the business. The DCF model then calculated a wholesale base case value at $31.46 per Pop, equating to approximately $3.3 billion as the value of the 110 Pops covered by NPCI's 63 C block licenses. The remaining four bars on the chart escalating to just over $8 billion showed calculations produced by the model using four modified assumptions (viz., reduced build-out costs, five wireless competitors instead of six, increased data revenues, lower cost of capital).

(3) The Meaning of Value

The parties' experts differed profoundly not only on their conclusions as to value but on the very meaning of the "value" which each sought to quantify.

Mr. Kern sought to determine "fair market value," which he defined as "the amount at which the subject assets would change hands between a willing buyer and willing seller, in an arm's length transaction, in which both buyer and seller have reasonable knowledge of the relevant facts, and neither is under compulsion to complete the transaction." (Kern Report 1, 42) Central to Mr. Kern's conclusion is the premise that the spectrum auctions conducted by the FCC met the

criteria embodied in the quoted definition of fair market value and that the prices bid at those auctions constituted the fair market values of the licenses sold as of the respective dates of the auctions. Thus, it was Mr. Kern's view that the D/E/F block auction which concluded in mid-January 1997 established the fair market value of those licenses at that time.[9] On the further premise that the C block licenses were functionally the same assets as the D/E/F block licenses, assuming various adjustments to account for differences between the various licenses, Mr. Kern concluded that the value per Pop of the C block licenses was equal to the price per Pop of the D/E/F block licenses after adjusting that price to reflect the differences between those licenses and the C block licenses.

By contrast, Dr. Salant does not recognize the concept of fair market value as defined by Mr. Kern, and he testified that "fair market value" is not a term used by economists such as he. Price, whether established in a public auction or in a private, arm's length negotiation, is not the same as value, as Dr. Salant conceives of value. "[I]t is well-established that auction prices, especially in complex procedures, can and do depart from any notion of 'value.'" (Salant Report 5) Dr. Salant describes what he perceives as "the fundamental difference between value and price" (id. at 7, emphasis in original). Dr. Salant states: "We use the DCF to compute the maximum amount a very prudent firm would be willing to pay for the licenses" (id. at 44, emphasis supplied), and in his testimony Dr. Salant repeatedly described "value" as a measure of "willingness to pay." Explaining the difference between value and price in the context of an auction, Dr. Salant observed that frequently the winning bidder will pay far less than the bidder's true valuation of the asset depending upon the level of competition presented by competing bidders. Indeed, it would appear

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[9] Consistent with this premise, the debtor concedes that the fair market values of the C block licenses were equivalent to the bids accepted by the FCC at the close of the auction and the reauction in May and July 1996, as of those dates.

that a buyer would never intelligently pay the full "value" which he ascribed to property in his DCF model, since one would never pay now the full value which the model would predict could only be earned over a span of years if all of the assumptions built into the model proved to be correct. Thus, the "value" produced by a DCF model is what a prudent buyer ought to be willing to pay for an asset based upon the assumptions embodied in the model, without regard to actual prices in the marketplace for similar property.

C. Conclusions on Methodology

The FCC's expert witnesses challenged the market comparable analysis relied upon by the debtor on two basic grounds, one focusing on the perceived non-comparability of the auctions and the other on alleged non-comparability of the licenses.

First, the FCC argued that the C block auction represented a different business opportunity than the D/E/F block auction and, consequently, that the C block auction attracted far more competition and hence generated higher prices. The theory of the FCC experts was that the C block auction was the last opportunity for an operator to establish a "national footprint" with 30 MHz of spectrum to compete with the major players such as AT&T, Sprint and Nextel, and that the D/E/F block auction was intended merely as a means for "incumbents" to "fill in the gaps" in their 30 MHz systems.

One might debate this theory[10] if it were relevant, but it is not. There is no dispute that the C block auction, in which 255 qualified bidders competed for 493 BTA licenses, was far more competitive than the D/E/F block auction, in which 153 qualified bidders competed for 1,479 BTA licenses, and that the prices bid for the C block licenses were exponentially higher than the prices bid for the D/E/F block licenses on a comparative MHz-Pop basis. The difference in the nature and competitiveness of the two auctions may explain why the C block bid prices were higher than the D/E/F block prices,[11] but why is not the issue. The issue before the Court is whether the C block licenses were sufficiently comparable to the D/E/F block licenses that the prices bid in the D/E/F block auction reflected a revaluation of the C block licenses as perceived in the marketplace.

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[10] Although the C block auction obviously did present a "different business opportunity" from the D/E/F block auction, it is questionable whether either the experts who devised the PCS auction process or the participants viewed the C block auction as an opportunity for the development of a truly national footprint to compete with the nationwide coverage of the major wireless operators such as AT&T, Sprint and Nextel. The C block auction was open only to entrepreneurial, small businesses and rural telephone companies with very limited capital resources. Moreover, the FCC regulations precluded any C block bidder from acquiring more than 98 licenses, 20% of the 493 licenses auctioned, thus precluding the acquisition of a truly national footprint. The most successful C block bidder, NPCI, acquired only 56 licenses in the initial auction and an additional seven licenses in the reauction. By contrast, AT&T, Sprint and Nextel all covered virtually the entire nation through a combination of cellular, PCS, ESMR and other spectrum.

[11] Many reasons for the radical decline in the perceived value of PCS spectrum were suggested at trial, including the difference in business opportunity emphasized by the FCC experts, the proposition that the C block bidders simply misjudged the market and grossly overbid in a frenzy of speculation, the sharp decline in the stock market prices of other companies in the wireless telecommunications business during the latter half of 1996 (the stock of OmniPoint, described by a witness as the "poster child" of public wireless operators, lost three-quarters of its value from May 1996 to April 1997) and the widespread concern or belief that the FCC had determined to remove the scarcity factor from the value of PCS and other wireless spectrum by flooding the market with spectrum through the D/E/F block auction and the auctions in 1997 for ESMR, WCS and LMDS spectrum, all of which were announced in the latter half of 1996. Undoubtedly all of these factors contributed to the decline in the perceived value of spectrum for wireless telecommunications.

On this issue it was Dr. Salant's view that the C block prices might have been just as high if that auction had been held in early 1997. He stated:

> Indeed, there is little reason to believe that had the C block auction been run, say over two or three months ending in January or February of 1997, with the same sets of bidders and the same initial eligibilities, that prices would have been much different. (Salant Report 30)

The evidence refuted that supposition. Of course, there was no auction for C block licenses in early 1997, but there was a market to test the value of those licenses — the market for public financing. If the market had indeed perceived the value of the C block licenses in January/February 1997 to be what the auction winners bid in May and July 1996, there is no reason to doubt that NextWave and the other C block licensees would have succeeded in raising the $1.6 billion of debt and equity they needed in the public market. The trial testimony on this issue of the NextWave representatives and their independent investment bankers was entirely credible. That evidence demonstrated that by January 1997 the market did not believe in the values bid in the C block auction. In meetings with the investment banking community, these witnesses found that the primary obstacle to funding NextWave's capital requirements was the perception based on the D/E/F block auction that the cost of the C block licenses was grossly excessive and that NextWave could not compete with that cost structure and debt burden. Despite the best efforts of these witnesses and others to convince the financial markets that C block licenses were different from and far more valuable than D, E and F block licenses (using many of the same arguments advanced by the FCC at trial), they failed to do so, and no C block licensee could obtain any public funding.

Thus, lack of comparability of the two auctions may explain why the C block bid prices were higher than the D/E/F block prices, but it does not answer the question whether the D/E/F block auction and other factors such as mentioned in footnote 11 undermined the market value of the C block licenses. The fact is that the market's perception of the value of PCS licenses

had changed by 1997. The FCC's 1999 reauction of C, E and F block licenses (predominantly C block licenses) demonstrated that the market value of this spectrum has declined even further.

The FCC challenged the comparability of the C block licenses and the D/E/F block licenses in only one respect — capacity. The FCC's experts presented a plethora of data designed to show the differences in capacity of a 30 MHz C block license and a 10 MHz D/E/F block license. They demonstrated that 10 MHz of spectrum is divisible into three usable channels, while 30 MHz can support eleven channels. With the sustained and rapid growth in mobile telephone ownership and usage and the likely advent in the coming years of "local loop service" and wireless data transmission,[12] capacity provided by 10 MHz will become insufficient to service demand. The debtor's witnesses countered by pointing to the sufficiency of 10 MHz for operations in even the most populous markets even today, more than two years after the February 1997 valuation date, and the virtual certainty that a continuation of market adjustments [13] and technological

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[12] "Local loop service" refers to customer usage of wireless mobile telephones in virtual replacement of traditional stationary telephones in the home and office. The experts do not anticipate that local loop wireless service will supplant traditional fixed point telephones unless and until monthly rates for wireless usage are brought down to levels competitive with high volume usage (say, 1,000 minutes or more per month) on fixed point telephones. With existing technology, wireless transmission of data uses a great deal of spectrum capacity. But, there is little demand for wireless transmission of data today, and the evidence at trial would not support any finding as to the likelihood of a material increase in demand for wireless data transmission within the next five years.

[13] Since capacity planning must be geared to maximum demand on a telephone system, the quantification of peak demand is an essential factor in capacity. The FCC's experts quantified peak demand at 12-1/2% in calculating when 10 MHz capacity might be exhausted in the future. The debtor's witnesses countered by pointing out that the 12-1/2% figure was predicated on historic mobile telephone usage during commuting hours, primarily at the end of the day, when most mobile phones were car phones. The advent of small, highly portable mobile phones has not only increased overall wireless telephone usage, it has also spread that usage over the entire day and weekends, thereby decreasing the peak demand factor to 8-1/2% despite the increase in overall wireless usage.

improvements and innovations[14] to increase 10 MHz capacity, known to the market in late 1996 and early 1997, will substantially accommodate all but the most radical increases in demand that might be expected six, seven or eight years in the future. Any capital costs to be incurred five or more years in the future to implement technological innovations to increase 10 MHz capacity must be weighed against the immediate and ongoing capital cost of carrying, or "warehousing," 30 MHz of capacity more than two-thirds of which is not needed now and which may become technologically obsolete before it is ever put to use.

Considering all of the evidence, I conclude as a matter of fact and law that the C block licenses were substantially comparable to the D/E/F block licenses in February 1997 for purposes of determining the value of the former based upon the auction prices of the latter. The D/E/F block auction determined the fair market value of those licenses as of the time of the auction. The D/E/F block auction concluded precisely at that point in time when the C block licenses are to be valued. The C block licenses are functionally identical to and interchangeable with the D/E/F block licenses in every respect, save only capacity. All 493 licenses in each of the C, D, E and F blocks covered precisely the same geography and population in the same BTAs. With respect to capacity, the undisputed evidence showed that even at the time of trial in April 1999 no PCS operator is using more than 10 MHz of spectrum in even the most densely populated BTA; indeed, no PCS operator is using more than two of the three channels available in 10 MHz in any BTA. Knowledgeable participants in the PCS market and their financiers knew in February 1997 that demand might exceed 10 MHz capacity in the most populous BTAs at some point in the perhaps

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[14] Such technological improvements include the greater efficiencies resulting from the various digital technologies (the most efficient of which appears to be CDMA), which may be replaced by even greater efficiency of 3G technology; utilization of eight kilobit EVRC vocoders in place of 13K vocoders; utilization of six sector in place of three sector antennae.

distant (five years or more) future, and they also knew that technology existed even then which might expand 10 MHz capacity to meet any reasonably projected demand. These findings do not mean that there was no difference between 10 MHz and 30 MHz of spectrum; they do mean that the C block licenses and the D/E/F block licenses were comparable for market valuation purposes, subject to appropriate adjustment for the capacity difference between 30 MHz and 10 MHz which might or might not become material at some point in the future depending upon market conditions, which might increase demand beyond 10 MHz capacity, and technological advances, which might expand 10 MHz capacity to meet demand.

Accordingly, I conclude that Mr. Kern's market comparable analysis is an appropriate method of determining the value of C block licenses in February 1997, subject to appropriate adjustments, discussed below.

The market comparable method of valuation satisfies two key legal requirements. First, valuation by reference to actual market prices in a public auction open to every potential purchaser in the marketplace and conducted under FCC regulations designed to provide every bidder with maximum possible competitive information establishes "fair market value" of the property auctioned as a matter of law. Keener v. Exxon Co., USA, 32 F.3d 127, 132 (4th Cir. 1994), cert. denied, 513 U.S. 1154 (1995) (bid price equated to fair market value). The Keener court explained:

> [F]air market value is, by necessity, best set by the market itself. An actual price, agreed to by a willing buyer and willing seller, is the most accurate gauge of the value the market places on a good. Until such an exchange occurs, the market value of an item is necessarily speculative.

Id. (citing Amerada Hess Corp. v. Commissioner of Internal Revenue, 517 F.2d 75, 83 (3d Cir. 1975). "[W]hen a third party makes an offer in cash, or its equivalent, for an item, a 'court can justifiably infer that the amount of an arms' length offer represents the value of the [asset]." Id. at

132 n.5 (citing Ellis v. Mobil Oil, 969 F.2d 784, 786 (9th Cir. 1992)). Fair market value is the price which a willing buyer would pay a willing seller in an arm's length transaction, where both the buyer and seller have reasonable knowledge of the relevant facts and neither is under compulsion to complete the transaction. See BFP v. Resolution Trust Corp., 511 U.S. 531, 548 (1994); In re Grigonis, 208 B.R. 950, 955 (Bankr. D.Mont. 1997). See also, In re Prince Gardner, Inc., 220 B.R. 63, 66 (Bankr. E.D.Mo. 1998) (citing BFP, 511 U.S. at 548 ("[i]n the vast majority of asset transfers other than real estate foreclosure sales, the Bankruptcy Courts can determine worth and reasonably equivalent value by referring to the common-law notion of fair market value")); see also Barber v. Golden Seed Co., Inc., 129 F.3d 382, 387 (7th Cir. 1997); In re RML (Mellon Bank v. The Official Commitee of Unsecured Creditors), 92 F.3d 139, 149 (3d Cir. 1996); In re Ozark Restaurant Equipment Co., Inc., 850 F.2d 342, 345 (8th Cir. 1988); In re Colonial Realty, 226 B.R. 513, 523 (Bankr. D.Conn. 1998); In re O'Neill, 204 B.R. 881, 887 (Bankr. E.D. Pa. 1997) (reasonably equivalent value means fair market value outside foreclosure context); In re Grigonis, 208 B.R. at 955. Fair market value, as defined by Mr. Kern in his Report and as established in the D/E/F block auction, is the legal standard for determining value in a proceeding to determine whether there has been a constructive fraudulent conveyance. Morris Communications, 914 F.2d at 469 (quoting United States v. 100 Acres, 468 F.2d 1261, 1265 (9th Cir. 1972)) ("[T]he method of 'comparable sales' in the relevant time frame is 'more appropriate than any other method in determining market value of the property.'"); El Paso Natural Gas Co. v. Federal Energy Reg. Comm'n, 96 F.3d 1460, 1464 (D.C. Cir. 1996) ("evidence of contemporaneous sales of comparable properties is generally the preferred method of valuation"); In re Martin-Trigona, 760 F.2d 1334, 1345 (2d Cir. 1985); Cowen v. Guidry, 274 F. Supp. 22, 24 (E.D.La. 1967) (there is no justification for using income approach to fair market value where comparable sales are available); In re

General Industries, Inc., 79 B.R. 124, 128 (Bankr. D.Mass. 1987) (under the circumstances at issue the court found the "market data method is the most practical method approach to valuation"); In re Thompson, 18 B.R. 67, 70 (Bankr. E.D.Tenn.1982) ("It is generally recognized that comparable sales in the vicinity of the subject property produce the best guides to determine fair market value").

Second, the market comparable method comports with the requirement that value be determined in bankruptcy proceedings by an objective standard. In re Independent Clearing House Company, 77 B.R. 843, 859 (D.Utah 1987); In re Taubaum, 160 B.R. 964, 986 (Bankr. S.D.Ohio 1993); In re Morton Shoe Companies, Inc., 24 B.R. 1003, 1009 (Bankr. D.Mass. 1982); In re Richardson, 23 B.R. 434, 444 (Bankr. D.Utah 1982); In re Checkmate Stereo and Electronics, Ltd., 9 B.R. 585, 591 (Bankr. E.D.N.Y. 1981), aff'd, 21 B.R. 402 (E.D.N.Y. 1982).

The same conclusions cannot be reached with respect to the DCF method of valuation relied upon the FCC. The DCF method suffers from four fundamental defects for purposes of valuing the C block licenses in this proceeding.

First, the income method of analysis values an enterprise as a totality; it does not value any particular element of property within the enterprise. A PCS license by itself cannot generate any income. Only an enterprise can generate income, and the enterprise consists of congeries of assets, management, a business plan, production and service employees and financing, and the enterprise exists in the context of a marketplace consisting of customers, competitors and regulators. Every element just mentioned has associated with it a number for every point in time, and all of those numbers must be included in the DCF model to calculate a value. The value so determined is the value of the enterprise, not any particular asset within it.

Second, in a case such as this the constituent elements incorporated in a DCF model for the mathematical calculation of value are not objectively ascertainable facts in the real world, as

are comparable sales and market prices. Every single line item in Dr. Salant's DCF model is an assumption utilized to calculate a projection, from which is mathematically extrapolated a net present value. The gap in reliability between objectively verifiable facts used in the market comparable methodology and the assumptions used in this kind of DCF analysis is compounded in the case of a start-up enterprise such as NextWave, where there is no record of historical performance on which to base assumptions for future projections. See, Langham, Langston & Burnett v. Blanchard, 246 F.2d 529, 532 (5th Cir. 1957) (valuation of a company as a going concern is inappropriate when the business is wholly inoperative or on its deathbed); In re Fred D. Jones Co., 268 F. 818 (7th Cir. 1920), cert. dismissed, Helman v. Central Trust Co. of Illinois, 257 U.S. 664 (1921); In re Art Shirt Ltd., Inc., 93 B.R. 333, 341 (E.D.Pa. 1988) (to treat a wholly inoperative or defunct company "as a going concern would be misleading and would, in fact, fictionalize the company's true financial condition"); In re Bellanca Aircraft Corp., 56 B.R. 339, 387 (Bankr. D.Minn. 1985). The problem is exacerbated with the DCF analysis relied upon by the FCC in this case. The textual description of Dr. Salant's DCF model at pages 42-46 of the Salant Report and in the three remarkably spare spreadsheets comprising Exhibit F to that Report are by no means self-explanatory, intuitively comprehensible or objectively verifiable by the trier of fact. We know only that the DCF model was created by Dr. Salant and his assistants and, as to the sources of their assumptions, the statement: "Besides our own experience, our analysis used industry sources and NextWave documents to form projections of key variables such as penetration and average revenue per user." (Salant Report 44-45)[15]

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[15] The reason for concern as to the reliability of a valuation predicated entirely on unverifiable, subjective assumptions is readily illustrated. For example, a variation of 1% in the presumed weighted average cost of capital (WACC) results in a $500 million change in the value calculated by Dr. Salant's DCF model. Changing the assumption of wireless competitors from six to five increases Dr. Salant's calculation of value by $1.5

(continued...)

Third, whatever uncertainties one may have with regard to the assumptions built into the DCF model by Dr. Salant and his associates, there can be no uncertainty that one key assumption of the model conflicted with reality. The model assumed the existence of financing to build out the necessary infrastructure to conduct a PCS wireless business using C block licenses. In the real world, however, not a single C block licensee was able to obtain financing to build out its system, precisely because of the financial community's concern as to the value of the C block licenses. This single fact undermines the utility of the model. It is not an answer to say that the model is designed to demonstrate a hypothetical value, because the law requires a determination of fair market value, not hypothetical value.

Finally, as acknowledged by Dr. Salant his DCF methodology is not designed to produce a calculation of "fair market value" as defined by appraisers and the courts. Dr. Salant disclaimed fair market value as a concept employed by economists and as an objective of DCF analysis. Dr. Salant's concept of value is something quite independent of the price which a fully informed seller and buyer would accept and pay in an arm's length, unconstrained transaction. DCF analysis is undoubtedly an essential tool for economists and financial analysts to assess risk in a proposed transaction or strategy by calculating the differences in value produced by manipulating the assumptions built into the model. But such "values" are hypothetical and cannot be used to supplant the market comparable method to determine current "fair market value" in circumstances,

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[15](...continued)

billion. The modification of the "retail base case" value of $2.5 billion to produce the "wholesale base case" of $3.3 billion (relied upon by the FCC as the value of NPCI's 63 C block licenses) by the simple expedient of deleting from the model all costs associated with retail appears to implicate the anomalous result of a negative value of $800,000 associated with the retail side of the business.

such as presented here, where market value can be determined by reference to the prices paid in actual, contemporaneous transactions involving comparable properties.[16]

For the foregoing reasons, I must reject the DCF methodology relied upon by the FCC.[17]

D. Conclusions on Value

This Court's decision on the FCC motion for partial summary judgment left open the question whether the C block licenses should be valued with an effective date as of January 3, 1997, the date on which the FCC issued its ruling conditionally awarding the C block licenses to NPCI, or February 19, 1997, the date on which NPCI executed and delivered the Notes to the FCC. I conclude as a matter of law that February 19 is the appropriate date for valuation, because it was not until NPCI complied with its purchase price obligation by delivering the Notes that the transfer occurred and the obligation was incurred.

As noted above, the Kern Report valued NPCI's 63 C block licenses at $810,400,000 based on the prices bid at the D/E/F block auction after giving effect to certain

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[16] In other circumstances the income method of valuation may be preferred, such as where there are no truly comparable transactions and income is objectively verifiable as a basis to determine present value based on highly reliable projection of future net income.

[17] Mr. Kern's reasons for rejecting the income approach to valuation were concisely stated in his Report at page 43:

> The income approach was considered but not utilized because of the uncertainty in projecting typical build-out costs, subscriber growth, operational expenses, changes in ARPU [average revenue per user], effects of competing technologies and numerous other factors necessary for a start-up company in a developing industry. Additionally, the income approach assumes a fully financed company holding the licenses and an operating network generating cashflow.

adjustments to the latter prices to reflect differences between the respective licenses. The FCC experts took exception to these adjustments in several respects, each of which will be considered.

Competition Adjustment. The FCC argued that there should be a "competition" adjustment because of the fact that the C block auction was more competitive than the D/E/F block auction (far more bidders, having submitted far higher upfront payments, competing for one-third the number of licenses). The argument must be rejected for two reasons. First, as explained above the market comparable approach looks not to the comparability of sales events but to the comparability of the things being sold. Thus, there is no need to make adjustment to reflect differences between the auctions. Second, it is self-evident that the difference in competitiveness between the two auctions is fully reflected in the differences in the prices bid — indeed, the bid differential is precisely the consequence of the greater competitiveness of the C block auction.

30 MHz/10 MHz Multiple. Although 10 MHz provides sufficient capacity presently and, in many or most BTAs, for the indefinite future, there is little doubt that 30 MHz capacity may have significant economic value in years to come in high population BTAs, for which NPCI holds eleven C block licenses. This would suggest an adjustment of 3 to 1 for the eleven high Pop licenses and no adjustment (i.e., a 1 to 1 ratio) for the 52 licenses where 30 MHz appears unlikely to add value to a 10 MHz license. Technological arguments exist which may justify a higher than 3 to 1 ratio (e.g., eleven channels for 30 MHz versus three channels for 10 MHz suggests a 3.67 to 1 ratio; "trunking factor" suggests a 4.5 to 1 ratio). However, applying even a 4.5 to 1 ratio to the eleven high Pop licenses and a 1 to 1 ratio for the remaining 52 licenses produces a total value for all 63 licenses materially lower than $810.4 million. Considering all the factors bearing on the issue, I conclude that there is no basis to select an adjustment different from the 3 to 1 ratio which Mr. Kern applied to all 63 licenses.

Cost of Capital. C block licensees enjoyed significant advantages in respect of financing their purchase price obligations to the FCC, described above. F block licensees enjoyed different financing advantages, also described above, and D and E block licensees were required to pay the FCC in full in cash for their licenses. To adjust for the financing differentials Mr. Kern used an interest rate of 11.75%, being the median value of 1996 debt offerings of seven other PCS and cellular operators. However, all seven of the issuers, including Sprint and Western Wireless Corp., were relatively well-established, operating companies. Weighing the conflicting testimony of the experts and other evidence, I conclude that 11.75% represented an overly optimistic cost of money for a development stage company such as NextWave in February 1997, and that 14% is a more reasonable adjustment to reflect the financing advantages of the C block licenses compared with the D, E and F block licenses.

Percentage of Favorable Financing Adjustment. Although he concluded that an adjustment was necessary to reflect the favorable financing available to C block licensees, Mr. Kern applied only 60% of that adjustment, rather than 100% necessary to realize full equalization, reasoning that a purchaser of C block licenses in February 1997 probably would not be willing to pay an amount sufficient to reflect 100% of the financing differential. I agree with the FCC experts that the financing adjustment should be taken at 100% in order to fully reflect the value of the C block licenses where that value is to be derived from a comparison with the D, E and F block licenses.

Summary. Near the conclusion of the trial at the Court's request Mr. Kern recalculated the value of the 63 NPCI C block licenses in accordance with his market comparable methodology but utilizing a variety of different assumptions on the disputed adjustments, discussed above (see Plaintiff's Trial Exhibits 136, 143). Using February 19 as the effective date for valuation and applying the Court's conclusions with respect to the adjustments discussed immediately above

(i.e., a 3 to 1 ratio to reflect the MHz differential, a 14% cost of capital and 100% of the favorable financing differential) results in a calculation of $908,146,000 (see Exhibit 136 sheet 6, Exhibit 143 sheet 4). Accordingly, it is this Court's ruling that $908,146,000 was the fair market value of NPCI's 63 C block licenses as of February 19, 1997. By any standard this did not constitute reasonably equivalent value for $4.6 billion of Transfers.

Under this ruling the $908,146,000 figure represents the fair market value of 100% of the debtor's C block licenses. As such, it does not take account of the Court's ruling under section II.A., above, that the 3% Payment of $142,309,000 constituted a fair exchange of value not subject to avoidance under Section 544. It is necessary to give effect to both rulings in calculating the total amount of NPCI's $4.7 billion of Transfers that is subject to avoidance under the statute. To this end it is appropriate to take 97% of the $908,146,000 figure, or $880,902,000, and add back the 3% Payment of $142,309,000. The sum, $1,023,211,000, may be said to constitute the fair market value of the entire consideration received by NPCI in exchange for the entire $4.7 billion of Transfers, for purposes of fraudulent conveyance analysis. The result of subtracting $1,023,211,000 from the $4,743,648,000 of total Transfers is $3,720,437,000, representing that portion of the total Transfers subject to avoidance under 11 U.S.C. §§ 544, 548 and 550.

The Court will conduct a further hearing to consider the question of remedy at the parties' earliest convenience.

Dated: White Plains, NY
May 12, 1999

/s/ Adlai S. Hardin, Jr.
U.S.B.J.